



**BARTHOLOMEW COUNTY
BOARD OF ZONING APPEALS
(June 30, 2014 Meeting)**

STAFF REPORT

Docket No. / Project Title: B/CU-14-04 (William and Justin Gelfius – Innovative Ag Solutions LLC)

Staff: Leanne Wells

Applicant: William and Justin Gelfius

Property Size: 142.8 acres

Zoning: AG (Agriculture General Rural) and AP (Agriculture Preferred)

Location: 20565 East 200 North, Clifty Township.

Background Summary:

The applicant has indicated that the proposed conditional use will allow a concentrated area feeding operation (CAFO) Type II facility located at the address listed above. Their intent is to construct one swine building that is approximately 82 feet 10 inches wide x 411 feet 8 inches long with a 10 foot deep manure pit below the building (with no manure lagoons on site). The building will house 4400 head of wean-to-finish swine—the animals will be brought in at approximately 12 to 14 lbs. and raised to market weight of approximately 275 lbs. This size farm is regulated by the Indiana Department of Environmental Management due to the number of animals. Currently, the land is being utilized for grain production.

According to Section 14.2 of the zoning ordinance, the definition of a concentrated animal feeding operation (CAFO) is the raising of animals for food, fur, or recreation in lots, pens, ponds, sheds, or buildings where they are confined, fed, and maintained for at least 45 days during any calendar year, and where there is no vegetation present over at least half of the animal's confinement area. A CAFO Type II farm is one which is subject to regulation by the Indiana Department of Environmental Management. The subject property has both AG (Agriculture General) and Agriculture Preferred (AP). The hog barn is proposed on the AG (Agriculture General) portion of the lot.

History of this Application:

At the January 27, 2014 meeting, the Board vote on case B/CU-13-09 and resulted in an indecisive vote. This led to an automatic continuance. On February 18, 2014 staff received a letter to withdraw from the next board meeting. On April 22, 2014 staff received a new application for one hog barn vs. two at the same location. On May 28, 2014 the Board voted to allow the case to be heard again within the calendar year from their original application date of December 23, 2013.

Preliminary Staff Recommendation:

Denial: Criteria 1 and 4 have not been met. The following conditions/commitments should be applied to any approval:

1. The applicants obtaining all the necessary approvals from the Indiana Department of Environmental Management and providing copies of those approvals to the Planning Department.
2. The applicant shall use a bio filtration system in the exhaust system (the end of barn fans).
3. The applicant shall plant coniferous type trees on the east side of the barn in order to mitigate odor.
4. The manure generated from the hog barn shall be applied using the injection method.

Zoning District Intent:

The Agriculture General Rural (AG) zoning district is intended to provide for a mixture of agricultural and residential land uses. This mixture is intended to support the long-term viability of agricultural operations, while also allowing increased non-agricultural development in areas adjacent to developed infrastructure. This district should be used to provide unique, rural housing options and the future ability to extend urban infrastructure.

The Agriculture Preferred (AP) zoning district is intended to provide an area suitable for agriculture and agriculture-related uses. This district is further intended to preserve the viability of agricultural operations, and limit nonagricultural development in areas with minimal, incompatible infrastructure.

Current Property Information:	
Land Use:	Agriculture (crop production)
Site Features:	Gelfius home and farm buildings, agriculture field, pond, and woods.
Flood Hazards:	100 year flood way fringe along Fall Fork Creek to the northwest of the barn location. The proposed barn is not in the flood hazard area, however the access drive is in this 100-year floodway fringe.
Vehicle Access:	County Road 200 North (Collector)

Surrounding Zoning and Land Use:		
	Zoning:	Land Use:
North:	AP (Agriculture: Preferred) AG (Agriculture: General)	Agriculture (crop production), Anderson Falls County Park Fall Fork Creek (a tributary of Clifty Creek) Single Family Residential
South:	AP (Agriculture: Preferred)	Agriculture (crop production)
East:	Bartholomew Co.— AP (Agriculture: Preferred) AG (Agriculture: General) Decatur Co.— Agriculture and Single Family Residential R-4	Bartholomew Co.—Agriculture (crop production), woods and Single Family Residential. Decatur Co.—Agriculture (crop production) and Single Family Residence (Waynesburg approx. 1 mile east)
West:	AP (Agriculture: Preferred)	Agriculture (crop production)

Interdepartmental Review:	
County Highway Department	County Road 200 North is a collector road, which means it carries more than local traffic. The general speed limit is 55 mph.

Bartholomew County Engineer, Danny Hollander Received Feb. 2014	<p>The road is 18 feet wide in most places with no shoulders.</p> <p>There is one subdivision located between 925 East and 1050 East at which point the road narrows to 17 feet 6 inches near this area. The speed limit on this section of the road is 30 mph.</p> <p>The road was most recently overlaid in 2003.</p> <p>Traffic volume ranges from 600-800 vehicles per day. For comparison, a low traffic volume road would average 500 vehicles per day.</p> <p>A sight visibility study was performed by the Bartholomew County Engineer Danny Hollander for the intersections of the proposed entrance at 200N of the CAFO and Meadow Drive on 200N. From the proposed drive entrance, the sight visibility to the west is 619 feet and 1324 to the east. These distances exceed the county standard of 450 feet on a 55 mph road. The visibility at Meadow Drive and 200N are 225 feet to the east and over 600 to the west. The speed limit along this section of 200N is 30 mph. These later distances meet the 200 foot minimum for 30 mph roads.</p> <p>During the past 5 years, there have been 6 reported accidents on 200 North from SR 46 east to the county line (1200 E). One accident was a result of the driver falling off the edge of the road and not being able to recover. The rest were driver errors or caused by animals.</p> <p>The Bartholomew County engineer expressed 2 major concerns for 200N:</p> <ol style="list-style-type: none"> 1) There may be multiple trips with trucks going in both directions. The road is narrow and trucks may not be able to pass one another on the edge of the road and this does damage to the edge of the road. This is also a safety issue since the road has little or no shoulder. 2) The road already contains moderately heavy truck traffic, adding more trucks will create greater conflict opportunities and the potential for the accident rate to go up. This would be the case for any additional traffic on any road.
INDOT Chris Bowling Received Feb. 2014	<p>INDOT has indicated the intersection of SR 46 and CR 925 East is of recent re-construction and has a passing and turning lane. Its width, radii, and general design are sufficient to support the additional traffic that will be generated.</p>
BCREMC:	<p>No comments.</p>
Bartholomew County Parks Board Nancy Hoeltke, Secretary Received Feb. 2014	<p>According to Nancy Hoeltke, the Bartholomew County Parks Board secretary, "A motion to vote no to the CAFO was decided because of the negative environmental impacts to the Anderson Falls Park." This motion was made at the Thursday, February 6, 2014 Parks Board meeting.</p>
Bartholomew County Purdue Extension Agent Kris Medic Received Feb. 2014	<p>Regarding manure application:</p> <p><i>"One needs a Category 14 applicator's license to apply more than 10 cubic yards or 4,000 gallons of CAFO manure on one's own land. If it is not from a CAFO, a farmer can apply manure from his/her own operation without a license. Any for-hire manure application requires an applicator's license as well as a business license."</i></p> <p><i>"On manure applications, it's important to note that manure from CAFOs can be</i></p>

	<p><i>applied on any fields where it's part of the fertility plan and requirements are met for setbacks, applicator certification, etc."</i></p> <p>Staff asked Ms. Medic to compare the amount of truck traffic that would be generated on a non-cafo farm (cropland). She stated that 1 semi for every 5 acres of corn at 200bu/acre could be used as an average. Therefore about 29 trucks would be necessary based on a 142 acre parcel (same size as the applicants).</p> <p>Kris Medic, Purdue University Bartholomew County Extension Educator</p>
<p>IDEM, Travis Goodwin Feb. 2014</p>	<p>Regarding best managements practices (BMPs) for CAFO operation: <i>"IDEM does not mandate or recommend any BMPs beyond our rule requirements. At times when deemed appropriate, we do add special permit conditions to deal with unique situations at farm sites."</i></p> <p>Regarding manure related CAFO spills for the State of Indiana: <i>"In 2013, 26 manure related complaint/spill calls came into the spill line (from 6842 total spill calls). Of those, 15 were related to regulated CFO/CAFO farms, and of those only 3 led to referrals to enforcement for being discharges of manure to waters of the State. No spills were related to the use of a drag line system for manure application."</i></p> <p>Regarding spills in Bartholomew County in the last 5 years: <i>"One complaint/spill occurring related to manure. It was in 2011 from an unregulated (but former CFO) farm and was related to pond muck/manure on a roadway from an unsecured load (from a vehicle assumedly transporting it)."</i></p> <p>Regarding the consequences to the environment and neighbors if a spill occurs: <i>"This is a case by case basis and hard to define what is typical. Many reported spills are small and easily contained, but some do result in more widespread release, and at times involve impact to streams, fish kills, etc. Most neighbor involvement we see is related to odor and setback related complaints."</i></p> <p>Regarding enforcement protocol of contamination from CAFO related accidents—does the farmer need to be caught in a contamination act to receive a penalty? <i>"Penalties are not assessed based on hearsay or accusation. If a violation is observed or can be traced back to a party after the spill occurred through incident investigation they would be responsible for any enforcement penalty assessed."</i></p> <p>Regarding the requirements for CAFO operators to repair environmental damage and compensate neighbors after spills: <i>"This is difficult question to answer. Requirements and penalties are on a case by case basis. IDEM does not get involved with compensation to neighbors/individuals after spills, just requires clean-up and potentially assesses monetary penalties for violations."</i></p> <p>Regarding how routine are inspections of CAFOs by IDEM: <i>"CAFOs are inspected at a minimum, once every five years but often they are visited more frequently. If complaints are received about a specific farm follow-up inspections are conducted of any complaint regardless of when the last inspection was performed. Likewise, if an existing farm proposed expansion and an inspection has not been done within the previous 12 months, the farm is re-inspected prior to expansion approval."</i></p> <p>Regarding the high-volume application of manure to fields typically associated with CAFOs or any farmer applying manure to their fields. Does this require IDEM approval? How common is this practice at non-CAFO locations? Are there any</p>

	<p>basic standards, such as setback distances from homes, streams, etc.?: <i>“Any crop farmer could utilize organic fertilizer (manure) as a nutrient source for crop fields. Typically, when there are livestock operations in an area, (livestock operations of any size are potential sources) local farmers utilize organic fertilizers to provide nutrients to crop fields. Land application activities conducted by a CFO or CAFO regulated by IDEM are required to adhere to land application requirements contained in 327 IAC 19-14.... the rule imposes restrictions on application rates based on agronomic use by planned crops, methods of storage/stockpiling of manures in the field, prohibits land application when fields are saturated and contains provisions to restrict or prohibit land application to frozen or snow covered ground, and requires documentation of all land application activities in the farms operating records. The rule also requires adherence to setbacks for land application in accordance with the Indiana NRCS Conservation Practice Standard 633. These setbacks vary depending on method of application and the slope of the land application area, and impose setbacks to public water supply wells and surface intakes, surface waters, sinkholes, private wells, drainage inlets, property lines and public roads. Regulated CFOs and CAFOs are allowed to market and distribute manure to be used as organic fertilizer, and sometimes do so. Once properly documented the material becomes the responsibility of the receiver/purchaser. These individuals are not under the jurisdiction of IDEM, but would likely fall under the jurisdiction of the Office of Indiana State Chemist (OISC) and would be required to adhere to the land application requirements of their rule, 355 IAC 7-1-1.”</i></p> <p>Travis Goodwin, Chief Confined Feeding Permits Section, IDEM</p>
<p>Department of Natural Resources John Bacone Received Feb. 2014</p>	<p>Regarding Anderson Falls County Park:</p> <p><i>“The park contains a high quality dry-mesic upland forest, carpeted in the Spring by a beautiful array of wildflowers. In addition, it contains a 14’ high waterfall that occurs where Louisville Limestone overlies the less resilient Waldron Shale. These two features, a high quality forest remnant and a significant geologic feature, were the criteria that qualified Anderson Falls to be dedicated as a State Nature Preserve.”</i></p> <p><i>“A State Nature Preserve dedication means that an area is considered state significant and once dedicated is declared to be the highest and best use a tract of land can have. Dedication is an “in-perpetuity” protection – there is no higher protection a tract of land can have in the State of Indiana. Many counties do not have a dedicated state nature preserve, especially one as aesthetically pleasing as Anderson Falls, which is the only dedicated state nature preserve in the (Bartholomew) county.”</i></p> <p><i>“Anderson Falls is a beautiful natural gem that the citizens of Bartholomew and the entire State can enjoy for generations to come. I would urge that ideally the CAFO be sited as far away from the Nature Preserve as possible, to help protect the setting and context of the area.”</i></p> <p>John Bacone, Director, Nature Preserves, Dept. of Natural Resources</p>
<p>Soil and Water Conservation District</p>	<p>No comment.</p>
<p>Indiana University Geologist Walter</p>	<p>Regarding water availability:</p> <p><i>“Water contamination: water moves through bedrock via fractures. Water</i></p>

Hasenmueller Received Feb. 2014	<p><i>movement in fractures moves more quickly than non-fractured rock. (One) cannot detect fractures from above, so must drill to investigate."</i></p> <p><i>"The bedrock (in Eastern Bartholomew County) is comprised of the Silurian and Devonian Aquifer System. Once past this point in the drilling process the driller is 'out of luck'. In other words, no water may be available unless drilling to very great depths."</i></p> <p>Walter Hasenmueller, Indiana Geologic Survey, Indiana University</p>
Purdue University Agriculture and Biological Engineering Professor Albert Heber Received Feb. 2014	<p>In a phone conversation with Albert Heber, professor of Agriculture and Biological Engineering at Purdue University in Lafayette, IN on February 14, 2014, Prof. Heber stated that three criteria are helpful to help mitigate odor (for neighbors) from a CAFO if residents are ½ mile or less from the site: 1. Use an injection method to apply manure directly into the soil, 2. Plant a tree buffer all the way around the facility (if possible), 3. Use bio-filtration in the pit fans of the barns housing the animals.</p>
<p>The comments listed above were from the applicant's previous application that pertained to CAFO's in general. The comments that related to this application were retained.</p> <p>The following agencies were asked for new comments:</p>	
County Highway Department Bartholomew County Engineer, Danny Hollander	No comments provided.
Bartholomew County Code Enforcement Mark DeBusk	No comments provided.
Bartholomew County Fire Inspector Gene Weaver	No comments provided.
Floodplain Administrator Thom Weintraut	No issues were noted with the floodplain as far as location.
INDOT	No comments provided.
Bartholomew County Health Department	The Health Department commented on water quality. They stated if a homeowner has concerns regarding quality, they have three options in which to get their water tested: 1) Sherry Laboratory at 629 Washington Street, 2) City utility building at 10 th and Marr, 3) the State of Indiana (location unknown).
Department of Natural Resources (DNR)	Mr. Basch has the following comments in regard to CAFO water usage and surrounding land owners:

<p>Water Rights Division Mark Basch</p>	<p>The State of Indiana has a water rights law in place to protect property owners. He explained that Significant Water Withdrawal (SWW) may potentially be the culprit if a nearby property owner experiences diminished water supply. The law is an after the fact statute—the homeowner must be experiencing the diminished supply after the SWW has come into production. He stated most cases are handled administratively and that they are not difficult to investigate as most are cause and effect.</p> <p>The farmer must fill out paperwork with the Department of Natural Resources (DNR) if they have a well with a capacity to produce 70 gallons/minute or 100,000 gallons/day water use.</p> <p>The Indiana Department of Environmental Management (IDEM) will contact the DNR if they detect there may be water issues with any application they are processing because IDEM does not regulate water quantity issues.</p> <p>If DNR finds upon investigation that the diminished water supply is caused by the SWW property owner and that well has the capacity to produce 70 gallons/minute or 100,000 gallons/day of water, the water rights law is invoked. The property owner with the diminished supply can submit receipts for bills that have been used to remedy the water quantity issue. DNR will issue the bills to the SWW property owner.</p> <p>It is best for the property owner to have a baseline test before the potential SWW property goes into operation.</p>
<p>Bartholomew County Parks Board Nancy Hoeltke, Secretary</p>	<p>According to Nancy Hoeltke, the Bartholomew County Parks Board secretary, this application does not change the position of the original motion to not support this operation. The original motion was made on February 6, 2014.</p>

Planning Consideration(s):

The following general site considerations, planning concepts, and other facts should be considered in the review of this application:

IDEM Requirements

1. The Indiana Department of Environmental Management (IDEM) regulates CAFO Type II operations. The list below is what the State of Indiana regulates and what it does not in regard to these operations.

What IDEM regulates:

- Facility setbacks from streams, wells, roads, property boundaries, and residences
- Manure handling and storage
- Facility design and construction
- Manure application rates and setbacks
- Monitoring and record keeping
- Storm water run-off
- Closure of manure storage structures

What IDEM does not regulate:

- Property Values
- Public Road Conditions
- Place Where CFOs and CAFOs Locate
- Disposal of Dead Animals (this is regulated by the Board of Animal Health)

- Groundwater Use
- Traffic, Odors and Vectors (e.g. flies, mosquitoes)

Truck Traffic

2. The applicant has stated there will be about 3 semi-truck trips per year for pig delivery. There will be about 120 trips per year for feed delivery, and 22 trips taking the pigs to market. The applicants have indicated that all manure generated from the hog barns can be land applied on their 378 acres in this area each year, but they may choose to also apply manure elsewhere. They will be using the drag line method so no truck traffic will be generated. Truck deliveries for nursery pigs and taking the pigs to market will be between 4:00 - 6:00 am. Feed delivery will take place between 5:00 - 7:00 am. Total truck traffic equals 145 one way truck trips per year or 290 round trips.
3. The approximate weight for trucks taking swine to market is 80,000 lbs. If applicable, the approximate weight of trucks delivering manure off-site is 8,000 lbs. According to Bartholomew County Engineer, the county does not have weight limits on their roads.
4. In February 2014, Bartholomew County Purdue Extension Agent, Kris Medic compared the truck traffic that will be generated from this CAFO to truck traffic from a non-CAFO farm (cropland). Ms. Medic stated that 1 semi for every 5 acres of corn at 200 bushels/acre could be used as a comparison. If a 142 acre parcel is used as an example (the same size as the applicants), about 29 trucks would be needed to haul this amount of corn.

County Road 200N

5. County Road 200N to SR 46 is the most likely route for trucks servicing this proposed CAFO.
6. According to Danny Hollander, Bartholomew County Engineer, County Road 200N is a collector road, which means it carries more than local traffic. The road is 18 feet wide with no shoulders in most places. It narrows to 17 feet 6 inches near the Oak Hills subdivision located between 925 East and 1050 East. The current county standard for a new collector road is 22 feet wide with 6 foot shoulders. According to the applicant the Federal Highway Administration regulations for width of semi-trucks and they are generally 8.53 feet wide.
7. According to Danny Hollander, traffic volume for this road varies from 600-800 vehicles per day. For comparison, the lowest traffic volume for a road is less than 500 vehicles per day.
8. In February 2014, County Highway Engineer Danny Hollander conducted a sight visibility study for the area intersections. From the proposed drive entrance for the CAFO, the sight visibility is 619 feet to the west and 1324 to the east. These distances exceed the county standard of 450 feet on a 55 mph road. The visibility at Meadow Drive and 200N is 225 feet to the east and over 600 to the west. These numbers are in accordance with the 200 foot visibility requirement along this section of 200N because the speed limit changes to 30 mph. According to the Bartholomew County Subdivision Control Ordinance, the design speed for new collector is 45 mph, with a minimum stopping sight distance of 310 feet and a minimum intersection sight distance of 450 feet.
9. In February 2014, Mr. Hollander expressed 2 major concerns that relate to this application about additional truck traffic on 200N: a) there may be multiple trips with trucks going in both directions. The road is narrow and trucks may not be able to pass one another on the edge of the road—doing so does damage to the edge of the road. This is also a safety issue since the road has little or no shoulder, b) the road already contains moderately heavy truck traffic, adding more trucks will create greater conflict opportunities and the potential for the accident rate to go up. This would be the case for any additional traffic on any road.

Manure Storage

10. The applicant is proposing to install one 10 foot deep manure pits beneath the hog barn. The pit will be constructed of concrete and 6", 12", 18" #4 rebar with a 6 x 6 wire mesh throughout. The floor of the pits will be 5" thick, on top of compacted subgrade. Perimeter tiles will be buried around the lower edge of the concrete pit. The tile maintains pressure between the groundwater levels outside of the concrete wall and manure levels inside the pit. An access point into the tile will provide a point where water samples can be taken to ensure the pit is not leaking. The pits are designed to hold manure for up to 633 days.

Manure Application

11. The primary amount of manure resulting from the CAFO will be applied to the surrounding farmland via a drag line system. This system injects the manure at the root zone—3"- 6" below the soil surface.
12. The applicant stated that the goal is to use all of the manure from the pit; however, this may not always be possible. If the applicant were to haul all the manure from the pit these shipments will be concentrated during the fall months, with some trips during the spring.
13. The applicant stated that manure application rates are based on the needs of the crop to be grown, not the size of the livestock operation that generated the manure. Therefore, the amount of manure to be applied to a field is based on an agronomic rate based on the nutrient value of the manure and the crops being grown.
14. The applicant stated that the practice of spreading manure on frozen ground is regulated by IDEM. Any farmer wishing to spread manure on frozen ground must receive a special permit for each request. The special permit is only allowed in emergency situations and granted when there are unforeseen instances. The applicant explained that the key to land application occurs only during appropriate times of soil, weather and ground conditions.
15. In February 2014, Bartholomew County extension agent Kris Medic stated that one needs a Category 14 applicator's license to apply more than 10 cubic yards or 4,000 gallons of CAFO manure on one's own land. If it is not from a CAFO, a farmer can apply manure from his/her own operation without a license. Any for-hire manure application requires an applicator's license as well as a business license. On manure applications, it's important to note that manure from CAFOs can be applied on any fields where it's part of the fertility plan and requirements are met for setbacks, applicator certification, etc.
16. In February 2014, Travis Goodwin, IDEM's Chief of CAFO Permitting Section supplied staff with the following statement:

"Any crop farmer could utilize organic fertilizer (manure) as a nutrient source for crop fields. Typically, when there are livestock operations in an area, (livestock operations of any size are potential sources) local farmers utilize organic fertilizers to provide nutrients to crop fields. Land application activities conducted by a CFO or CAFO regulated by IDEM are required to adhere to land application requirements contained in 327 IAC 19-14...the rule imposes restrictions on application rates based on agronomic use by planned crops, methods of storage/stockpiling of manures in the field, prohibits land application when fields are saturated and contains provisions to restrict or prohibit land application to frozen or snow covered ground, and requires documentation of all land application activities in the farms operating records. The rule also requires adherence to setbacks for land application in accordance with the Indiana NRCS Conservation Practice Standard 633. These setbacks vary depending on method of application and the slope of the land application area, and impose setbacks to public water supply wells and surface intakes, surface waters, sinkholes, private wells, drainage inlets, property lines and public roads. Regulated CFOs and CAFOs are allowed to market and distribute manure to be used as organic fertilizer, and sometimes do so. Once properly documented the material becomes the responsibility of the receiver/purchaser. These individuals are not under the jurisdiction of IDEM, but would likely fall under the jurisdiction of the Office of Indiana State Chemist (OISC) and would be required to adhere to the land application requirements of their rule, 355 IAC 7-1-1."

Information Regarding CAFO Spills

17. According to IDEM, between July 1, 2012 and June 30, 2013, there were 15 spills in the State of Indiana that involved animal waste. Of those 15 manure spills, 6 originated from IDEM regulated farms (2 from CAFOs and 4 from CFO sized farms). The additional 9 spills were from unregulated farms with animals below the threshold listed on IDEM's website (Source: Steven Howell, Director of IDEM's Office of Government and Community Affairs).
18. Examples of animal waste contamination from a CAFO are applying manure outside of state regulated setbacks, applying manure prior to a rain event thereby creating contaminated run-off, discharging manure directly into waters of the state, malfunctioning manure application systems, and leaving a shut off valve open (Source: IDEM). According to CFO permitting Chief Travis Goodwin of

IDEM, the most recent complaint/spill in Bartholomew County related to a manure spill in 2011. This was an unregulated (but former CFO) farm related to “pond muck/manure on a roadway from an unsecured load (from a vehicle assumedly transporting it).”

19. The applicant states there is no requirement that a farmer must be caught in the act to receive a violation for contamination. If a spill or water quality violation is suspected or found, IDEM, EPA and/or Department of Natural Resources (DNR) staff will collect water samples to determine if contamination has occurred. Samples are taken from surface water, soil, and ground water if necessary in the area of the alleged spill. If the point of origin is found, IDEM/EPA/DNR staff will determine if the spill was a single occurrence (and is over), or additional steps need to be taken to stop any release. There are monetary penalties assessed depending on the violation. Aside from penalty for the offender, compensation to neighbors for environmental damage was not mentioned as part of a remedy.
20. According to the applicant, each IDEM permitted operation must develop an Emergency Spill Response Plan. This plan should outline detailed steps that will be taken to contain and manage a release in the event that one occurs. Indiana Rule 327 IAC 19-13-4 states the following:

The CFO must develop an emergency response plan that:

1. Contains procedures to:
 - a. Contain a manure release to prevent it from entering waters of the state
 - b. Locate the source and stop the release of manure or waste liquid
 - c. Return the manure or waste liquids to an approved storage structure
 - d. Land apply the collected manure or waste liquid
2. Includes the names and telephone numbers of persons identified as responsible for implementing the plan.
3. Identifies areas where potential manure releases can occur and their corresponding drainage points.
4. Identifies the equipment and cleanup materials that will be used in the event of a manure release.

A copy of the emergency response plan is to be maintained in the farm operating record and must be implemented anytime a manure release occurs. Notification to IDEM in the event a spill occurs is a requirement of the law. The CFO Rule outlines reporting requirements. CFOs are required to report a known manure release within 2 hours of the release or be considered in violation of their permit. Violations are subject to enforcement actions and fines.

Anderson Falls

21. In February 2014, Indiana Department of Natural Resources Director of Nature Preserves, John Bacone, has indicated that a state nature preserve, such as Anderson Falls, is an area that the State considers significant. This designation is the highest and most protective designation a tract of land can receive from the State and it's designation is in perpetuity—there is no higher protection the State can give a piece of land. Anderson Falls contains a high quality dry-mesic upland forest. In addition, the park contains a 14 foot water fall of Louisville Limestone which overlies less resilient Waldron Shale. It is these two features—a high quality forest remnant and a significant geologic feature—that qualify the park for the nature preserve designation. Mr. Bacone wished to iterate that this type of honor does not exist in every county, “especially one as pleasing as Anderson Falls, which is the only dedicated state nature preserve in (Bartholomew) the county.” He urged that it would be desirable to have the CAFO located as far from the nature preserve as possible.
22. At the Bartholomew County Parks Board meeting held on February 6, 2014 a motion was made to vote “no to the concentrated animal feeding operation because of the negative environmental impact it would have on Anderson Falls Park. The motion was passed unanimously.” (*Source: Faxed statement from Bartholomew County Parks Board Secretary, Nancy Hoeltke.*)

Site Specific Issues

23. The applicant has indicated that the location takes in to account soil type compaction, drainage, prevailing winds in relation to housing of the producer and neighbors, and natural windbreaks as shelter breaks.

24. The applicant is proposing one barn to be sited approximately 1200 feet south of Fall Fork Creek with topography that will slope to the south away from the creek. The barn is proposed to be located 100 feet from the east property line and several hundred feet from other property lines. The closest residence is approximately 2400 feet to the north and the closest residential zoning district is approximately 1.6 miles to the east in Decatur County.
25. The applicant has provided a soil and site evaluation performed by John Bowen of Chestnut Ridge Consulting in Seymour, IN. Mr. Bowen is a registered soil scientist in the state of Indiana. The report states there is a “seasonal high water table present at all 6 soil borings ranging in depth from 5 to 14 inches below the soil surface.” According to Mr. Bowen, the site evaluation was conducted in October 2013, a very dry time of year; the presence of water is more than likely going to be more prevalent during the wetter months. This type of water table generally warrants a drainage system to be installed surrounding any structure to remove water from the location. The applicants have indicated that the necessary drainage system will be installed.
26. According to the USDA’s Natural Resources Conservation Service (NRCS) website, the web soil survey revealed 47.1% of the area of interest where the hog barns would be located is comprised of Fincastle silt loam (FdbA). This soil is found to be rated as moderate to corrosion of concrete. Mr. Bowen suggested that this type of finding is worthy of a greater investigation by a qualified individual to determine if the manure pits should be lined on the sides as well as the bottom. According to the NRCS website:

“Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.”

According to the applicant the risk or concern of corrosion to manure pits is typically regarding the rebar or reinforcement steel used to sustain the concrete itself. The soil where the proposed barn is sited has a pH of 6.6-7.3. Concrete runs the potential for corrosion in acidic soils. The concrete used for this building will be high strength, low permeability. The walls will be 10” thick, with 2” of concrete surrounding each piece of rebar. There will be 3” of concrete used to surround the rebar on the bottom of the pit.

27. There is a stand of trees that exists on the applicant’s property and the property to the northeast. It is a mixture of deciduous and coniferous species. The applicant has explained that by surrounding the barn with trees to abate odor, this will block the air flow from the barn on the west side of the barn—an important consideration for the cooling and comfort of the animals. If additional trees are to be planted, the applicant has agreed to plant along the eastern side of the barn in order to allow for free circulation from the west side. The applicant is amenable to using bio-filtration on the exhaust fans in order to help mitigate odor.

Water Availability and CAFO Water Usage

28. Indiana University geologist Walter Hasenmueller has indicated that the bedrock in this portion of the county is comprised of the Silurian and Devonian Aquifer System. Once past these two aquifer systems, if one surpasses the ability to find water in these two aquifers, the driller may only be able to find water at much greater depths.
29. In this application, the amount of water use for the barn has been estimated at 2 to 3 million gallons of water per year. By comparison, according to Keith Reeves with Columbus City Utilities, a typical single-family home uses between 24,000 and 168,000 gallons of water per year, with average usage being approximately 60,000 gallons per year.
30. The applicant stated in their application that additional water will be provided to the area by the installation of a pipeline from Eastern Bartholomew Water Corporation. The pipeline will be extended through an easement on the Gelfius property east to Decatur County. This easement was recorded with the county on June 9, 2014. Donny Smith of Eastern Bartholomew Water Corporation stated that surrounding neighbors up to 500 feet away could connect to the water main for a specific fee but

will be charged an additional fee for any length over the 500 feet. It is not clear in the application whether the applicant is going to use this public water line for the hog barn operation.

31. According to Mark Basch of the Department of Natural Resources (DNR) Water Rights Division, the State of Indiana has a water rights law in place to protect property owners. A property owner with diminished supply as a result of significant water withdrawal by the CAFO can submit receipts for bills to remedy the water quantity issue. DNR will issue the bills to the CAFO. It is best for the property owner to have a baseline test before the potential CAFO goes into operation.
32. The Bartholomew County Health Department stated if there is a question of water quality, the homeowner has the three places to get their water tested: 1) Sherry Laboratory at 629 Washington Street, 2) City utility building at 10th and Marr, and 3) the state of Indiana (location unknown).

Best Management Practices (BMPs for CAFOs)

33. The applicant has indicated that:

"In 2002 when the US Environmental Protection Agency (EPA) was developing requirements for Concentrated Animal Feeding Operations (CAFO), they outlined some specific areas of concern with regard to protecting water quality. This publication places emphasis on five (5) management areas which include: Manure Storage, Land Application and Nutrient Management, Public Perception, Swine Confinement Areas, and Other Practices. These broad areas provide outlines for individual states to implement individually updated regulations or Best Management Practices (BMPs). In Indiana these and other BMPs are incorporated into the laws and rules administered by the Indiana Department of Environmental Management (IDEM)."

34. Mr. Travis Goodwin with IDEM has indicated that while IDEM does not use BMPs beyond the rule requirements, "...at times when deemed appropriate, we do add special permit conditions to deal with unique situations at farm sites."

Comprehensive Plan Consideration(s):

The Future Land Use Map indicates the future use of this property as Agriculture Preferred. The district includes prime farmland in Bartholomew County outside developed areas. Prime farmland in our county includes most of the eastern and northern parts of the county. There are a few areas of prime farmland in the south and west. Element 1 of the comprehensive plan includes the goal of preserving productive farmland, as well as 18 policies directly relating to farmland preservation (Goal 1, Policies 1-A through 1-R).

The area to the immediate north and east of this location is indicated as Agriculture General Rural by the Future Land Use Map. The General Rural District is viewed as less restrictive than the preferred and natural resource districts. Intensive development would be discouraged here. The area proposed as General Rural is now a mix of farmland, woodlands, residential, some institutional (such as schools, churches and fire stations), and limited commercial (such as small stores). These uses are appropriate. Most of the area proposed for this district is south and west of the City of Columbus jurisdiction. The general character here is hilly and wooded, with many areas of steep slopes and scenic beauty. There are environmentally important forests in this area. There may be other natural areas within this district, though not specifically designated at this time. Much of the district may not be suitable for septic systems. Residential development is appropriate if served by public sewer and water, and if designed with drainage systems that address the development and do not contribute to drainage problems elsewhere. Cluster development and smaller lot sizes should be encouraged to maintain open space and natural areas.

The Comprehensive Plan for Bartholomew County states general land use principles. There are two principles relevant for this case: 1.) preserve productive farmland for farming and 2.) make land use decisions that protect and improve community resources and the environment. In order to preserve productive farmland for farming, the plan committee found that over half of the land in the county planning jurisdiction is prime farmland according to a definition developed by the committee. Farming is an important part of Bartholomew County's history and economy. Farmland preservation is becoming a greater concern in the county, and in the state overall, as more and more prime farmland is lost to development. The committee found that the county should develop a plan for preserving prime farmland. The second principle states that

land use decisions and construction planning should consider impacts on county resources including, but not limited to, drainage systems, environmentally sensitive areas, surface and groundwater resources, significant forested areas, natural habitats, and historic resources.

The following Comprehensive Plan goal(s) and/or policy(ies) apply to this application:

1. **Goal 1: Preserve productive farmland and maintain the productive capacity for a strong county agricultural industry.**
2. Policy 1-D: Require appropriate buffers to allow the continued full use of adjoining farmland and to reduce conflicts between neighboring uses.
3. Policy 1-F: Direct development away from more productive farmland and agricultural areas.
4. Policy 1-G: Prevent subdivision development from interfering with ongoing agricultural operations.
5. Policy 1-J: Require development to take place in a manner that allows for preservation and conservation of farmland, open land and significant natural features.
6. Policy 1-K: Protect neighboring farmland from increased water runoff (both surface and subsurface), night lighting, sun-blocking interference, trespassing or anything else which might interfere with existing or potential farm operations.
7. Policy 1-Q: Promote development of businesses such as value-added agricultural industries that enhance agriculture and agribusiness while protecting the character and environmental quality of the county.
8. **Goal 2: Protect open space such as woodlands, flood plains, and wetlands for environmental, recreational, scenic, and life-style benefits.**
9. Policy 2-B: Ensure that development occurs in a manner that preserves farmland, wildlife habitat, woodland, and significant natural features.
10. Policy 2-C: Protect from development unique areas of the county with special natural features, for open space, parks, and wildlife habitat, for the benefit of present and future generations, while avoiding competition with private property ownership.
11. Policy 2-E: Utilize information about soil and water resources to make wise land use decisions and to prevent damage to the environment.
12. **Goal 7: Maintain and enhance the quality of the water, air and land.**
13. Policy 7-C: Ensure, to the extent possible, that new development does not cause deterioration in water quality or quantity for existing development.
14. Policy 7-L: Ensure that human and animal waste disposal is carried out in accordance with applicable environmental regulations.
15. **Goal 12: Improve Water Quality and Ensure an Ample Supply of Potable Water.**
16. Policy 12-A: Protect ground and surface water from contamination by chemicals, industrial waste, septic systems, animal waste, human waste, and sludge.

Provisional Findings of Fact/Decision Criteria

Section 12.4(D) of the Zoning Ordinance permits the Board of Zoning Appeals to allow conditional uses that meet the criteria listed below. The Board may impose reasonable conditions as part of an approval.

1. **The proposal will not be injurious to the public health, safety, and general welfare of the community.**

Provisional Findings: The type of facility that the applicant is requesting is a modern operation according to today's swine industry standards. This type of operation is very different from the older swine operations that used exposed manure lagoons as their primary catch basins for waste. The applicant is proposing 1 barn to be sited approximately 1200 feet south of Fall Fork Creek with topography that will slope to the south, away from the creek. Regardless of the caliber of a facility, manure accidents and spills can and do occur. Due to the presence of Anderson Falls, a manure spill could have serious implications. There is a safety issue of humans being contaminated because the falls serve as a summer 'playground' for locals and visitors alike to the area. Regarding the safety of 200N, Danny Hollander, Bartholomew County

Engineer had the following concerns: the narrowness of the road allowing for two semis passing one another safely, and the potential for the additional truck traffic to increase accidents on 200N. If this road were newly constructed, it would be 22 feet wide with 6 foot shoulders, and have a speed limit of 45 mph. A typical semi-truck width is 8.53 feet wide. The narrowest section of the road near Oak Hills subdivision measures only 17.6 feet. Further, the existing section of the road near the Oak Hills subdivision has a 30 mph speed limit due to sight visibility limitations, although there is no evidence pointing to this speed limit as being strictly adhered to. Due to the complicated nature of a CAFO, the public health concerns associated with Anderson Falls, and the public safety concerns associated with increased truck traffic on 200N (especially at the point where sight distance is limited) *this criterion **has not** been met.*

2. The development of the property will be consistent with the intent of the development standards established by the Zoning Ordinance for similar uses.

Provisional Findings: The development of the property will be consistent with the intent of the development standards of zoning ordinance Section 6.3. The ordinance requires CAFO Type II operations to be located 100 feet from all property lines and a minimum of ½ mile from residential zoning districts. These setbacks are more restrictive than those for other agricultural uses. *This criterion **has** been met.*

3. Granting the conditional use will not be contrary to the general purposes served by the Zoning Ordinance, and will not permanently injure other property or uses in the same zoning district and vicinity.

Provisional Findings: The applicant is proposing one hog barn and has reported that the maximum potential water use will be approximately between 2 to 3 million gallons per year. As of June 9, 2014 the applicant has been permitted for installation of public water on the property by Eastern Bartholomew Water Corporation. Further, the State of Indiana has a water rights law in place to protect property owners. Therefore, due to the potential for the applicant to use public water for the operation and a State water rights law in place to protect property owners who may experience diminished water quantity due to a CAFO, *this criterion **has** been met.*

4. The proposed use will be consistent with the character of the zoning district in which it is located and the recommendations of the Comprehensive Plan.

Provisional Findings: While this application is aligned with the agricultural goals and policies laid out in the Comprehensive Plan, it is not in sync with the environmental goals and policies of the Comprehensive Plan. The goals and policies in possible jeopardy are: 2, 7, and 12. Anderson Falls County Park is a unique feature predating any of the development currently located in the area. The park has two significant features, a high quality dry-mesic upland forest remnant and the geologic feature of Louisville Limestone and Waldron Shale that make up the falls. The park has been designated a nature preserve—the highest protection the state can give a tract of land. This is the only state preserve in Bartholomew County. Were the waters that feed the falls to become contaminated, it would create immeasurable and potentially unrepairable damage to this ecosystem. In conjunction with the concerns expressed by the Department of Natural Resources, the Bartholomew County Parks Board stated their resistance to siting the CAFO near Fall Fork Creek—the creek that comprises the falls of the park. It should also be made evident that the area the CAFO is being proposed is on the cusp of an agricultural general rural district that contains a mixture of both residential and agriculture land uses. This district is located directly to the north of the applicant's property; it is hilly and wooded, with many areas of scenic beauty, contains environmentally important forests as well as many residential properties. *This criterion **has not** been met.*

Board of Zoning Appeals Options:

In reviewing a request for conditional use the Board may (1) approve the petition as proposed, (2) approve the petition with conditions, (3) continue the petition to a future meeting of the Board, or (4) deny the petition

(with or without prejudice). Failure to achieve a quorum or lack of a positive vote on a motion results in an automatic continuance to the next regularly scheduled meeting.